

Acquisition Notice Posting

Headquarters Acquisition Division

NASA OFFICE OF THE CHIEF TECHNOLOGIST CROSSCUTTING CAPABILITY DEMONSTRATIONS DIVISION TECHNOLOGY DEMONSTRATION MISSIONS PROGRAM

General Information

Solicitation Number:	NNH10CC001L
Reference Number:	N/A
NAIS Posted Date:	May 25, 2010
FedBizOpps Posted Date:	May 25, 2010
Response Date:	Jun 30, 2010
Recovery and Reinvestment Act Action?:	NO
Classification Code:	A -- Research and Development
NAICS Code:	541712 - Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)
Set-Aside Code:	N/A
Internet Address:	http://prod.nais.nasa.gov/cgi-bin/eps/bizops.cgi?gr=D&pin=04#141535

Office Address

NASA/Goddard Space Flight Center, NASA Headquarters Acquisition Branch, Code 210.H, Greenbelt, MD 20771

Description

In fiscal year 2011, NASA plans to begin the Technology Demonstrations Missions Program. One of the greatest challenges that NASA faces in incorporating advanced technologies into future missions is bridging the mid TRL gap (Attachment: TRL

Definitions) between early development and mission infusion. Maturing a space technology to flight readiness status through relevant environment testing is a significant challenge from both a cost and risk perspective. The primary goal of the Technology Demonstration Missions Program is to mature space technologies that are of benefit to multiple customers through flight readiness and mission infusion.

To support program formulation, The NASA Office of the Chief Technologist (OCT) is seeking to identify candidate crosscutting system-level technologies to be demonstrated in relevant environmental conditions. Specifically, “system-level technologies” implies an integrated spacecraft system and not component-level demonstrations.

A key requirement in this program is that the technology under consideration must clearly be crosscutting, defined as a technology with potential to benefit multiple NASA mission directorates, other government agencies, or the space industry. OCT is seeking technology demonstration candidates that advance the technology readiness of the selected systems, provide tangible, innovative technology products, are cost effective, and capture significant public interest and awareness. The candidate technology must be mature (TRL of 3 to 5), and the proposed flight demonstration must raise the TRL of the candidate technology to a TRL of 6, such that it may be infused into the critical path for future NASA missions. The information gathered from this RFI could be integrated into future Broad Agency Announcements (BAA), Request for Proposals (RFP) or Space Act Agreements (SAA) for the Technology Demonstration Missions Program.

For potential future solicitations, including NASA Research Announcements (NRA), Cooperative Agreement Notices (CAN), Announcements of Opportunity (AO) or SAAs, only flight demonstrations that can be completed within a maximum of three years will be sought. To demonstrate a potential infusion path, flight teams will be required to have a sponsor (or sponsors) to cost share the proposed demonstration. OCT expects that a minimum of 25% of the total Life Cycle Cost (LCC) be contributed by another source outside the OCT under potential future funded opportunities. Competed flight test demonstration opportunities will be open to teams involving NASA centers, industry, other Government agencies and academia.

Performing these flight demonstrations is intended to advance the readiness of the selected systems, provide tangible products capable of rapid infusion to NASA missions, and capture significant public interest and awareness. Executing these engaging and technically challenging space flight demonstrations, including designing the flight test program, building the flight hardware and performing/operating the flight demonstration is an outstanding means for developing the current NASA and industry workforce to handle more challenging and more sustainable space missions and operations in the future. Examples of the types of crosscutting technologies that may be considered for this technology demonstration program include (but are not limited to) optical communications, tether systems, autonomous rendezvous and docking/undocking, space power systems, humanoid robotics, inflatable/deployable deceleration systems, advanced in-space propulsion, aerocapture, landing/surface systems, and solar sails.

Instructions to Responders

This is not a request for proposal, quotation, or invitation for bid notice and is intended for information and planning purposes only. NASA does not intend to award a contract on the basis of this RFI. However, NASA may consider issuing a formal solicitation at a later date. NASA will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that NASA is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. NASA may contact respondents to this RFI if clarifications or additional information is desired. Responses to this RFI do not bind NASA to any further actions related to this topic. All future BAAs, RFPs or SAAs are subject to congressional approval and availability of funds.

This announcement contains all information required to submit a response. No additional forms, kits, or other materials are needed.

NASA appreciates responses from all capable and qualified sources including, but not limited to, NASA Centers, universities, university affiliated research centers, federally-funded research and development centers, private or public companies, and government research laboratories.

Technology demonstration opportunities will be open to teams involving NASA centers, industry, other government agencies and academia. Leads for the responding teams may be from any of these sources. All participants must be U.S. entities.

Oral communications are not acceptable in response to this notice.

NASA will not consider material that is marked classified or proprietary. NASA reserves the right to use responses to develop future solicitation and other types of public correspondence. However, NASA does not intend to release any individual RFI responses.

Submissions have the following formatting requirements: Microsoft Word formatted documents of 2 pages or less at 12 point font.

RFI response should address these seven areas, as a minimum:

- Executive level overview of the crosscutting technology being proposed.
- Impact/Payoff: What is the impact/payoff of this technology demonstration to NASA and to the aerospace community?
- Technology Readiness: Provide information on the current technology readiness level (TRL) of this concept and the method of ensuring the technology will attain at least a TRL 6 through demonstration. Provide references if possible.
- Potential Partnerships: Who are the possible cost sharing partners? Why are they interested in flight demonstration of this technology?
- Risk: What are the primary risk factors involved in this flight demonstration? What risk factors will be retired with flight testing?

- Platform: What is the preferred flight platform for this technology demonstration concept? Platforms include, but are not limited to, primary launch vehicles, ISS, secondary payloads, sounding rockets or other hypersonic test vehicles, high altitude balloons, UAVs, commercial suborbital launch vehicles, commercial or military aircraft.
- Cost: Provide a Rough Order of Magnitude cost range.

NOTE: Questions and comments may be forwarded via electronic transmission to bonnie.f.james@nasa.gov no later than midnight on June 30, 2010.

All responses to this RFI must arrive at this address by midnight on 6/30/10.

Mark all responses: RFI, Technology Demonstration

Point of Contact

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